

CLAIMS

BEST AVAILABLE COPY

1. A seal for laparoscopic port comprising:
a base adapted to engage a cannula, the base including an axial aperture for a surgical instrument;
5 a multiplicity of jaws mounted on the base, the jaws being movable radially with respect to the aperture between an open position wherein a shaft of the surgical instrument may pass freely and a closed position wherein the jaws engage said shaft and provide a restraining force restraining radial movement of the shaft; and
an actuator rotatable to urge the jaws to move between said open position and said
10 closed position;
wherein the actuator includes a click stop arrangement adapted to provide frictional engagement at a position intermediate the open and closed positions to hold the jaws at the intermediate position.
2. A seal as claimed in claim 1 wherein the click stop arrangement
15 comprises a discontinuity on the actuator arranged to engage a complementary discontinuity on the base.
3. A seal as claimed in claim 2 wherein the discontinuity comprises a protrusion or recess on the actuator arranged to engage a complementary detent or protrusion on the base.
- 20 4. A seal as claimed in any preceding claim wherein the click stop arrangement comprises a protrusion of detent on the jaw adapted to engage a complementary formation on the actuator.
5. A seal as claimed in claim 4 wherein the click stop arrangement
comprises a pin extending from each jaw, the pin being received in a recess in a guide on
25 the actuator.

6 A seal as claimed in any preceding claim wherein each jaw includes a follower movable along a respective guide on the actuator, the guide having inner and outer ends corresponding to open and closed positions of the jaw,

5 the guide further having an intermediate discontinuity adapted to engage the follower preventing closure of the jaw by providing a closure resisting force greater than said restoring force.

7 A seal as claimed in claim 5 or 6 wherein the guide is an arcuate channel or slot in the actuator.

10 8. A seal as claimed in claim 7 wherein the channel or slot is parabolic or exponential in shape.

9 A seal as claimed in any of claims 5-8 wherein the recess is located on the radial inner surface of the guide.

15 10. A seal as claimed in any preceding claim wherein the jaws are biased radially inwardly.

11 A seal as claimed in claim 10 wherein the jaws engage a lip of the resilient diaphragm and are biased radially inwardly when the diaphragm is dilated